# Cluster technology for the formation and parallel filtering of large images

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***Abstract***

This paper considers two problems to be solved when processing large images. One of them is the problem of assessing and correcting image distortions caused by the influence of the optical system, CCD sensors and the dynamics of the vision-based measurement process. The other problem is the automatic alignment of image fragments by joint processing of overlapping areas (edges) of the neighboring source images. This paper discusses the possible technologies for generating and processing the images and describes the most efficient, in terms of acceleration, scheme for processing large images, implemented at the cluster of the Samara Scientific Center of the Russian Academy of Sciences.

*Keywords:* cluster technology, large image, processing image, correcting image, optical system, CCD sensor.

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